

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/552,028
Source: IFWP
Date Processed by STIC: 09/25/2006

ENTERED



IFWP

RAW SEQUENCE LISTING

DATE: 09/25/2006

PATENT APPLICATION: US/10/552,028

TIME: 10:32:51

Input Set : A:\PTO.RJ.txt

Output Set: N:\CRF4\09252006\J552028.raw

```

5 <110> APPLICANT: De Roux, Nicolas
6      Genin, Emmanuelle
7      Milgrom, Edwin
8      Chaussain, Jean-Louis
9      Carel, Jean-Claude
11 <120> TITLE OF INVENTION: GPR54 RECEPTOR AGONIST AND ANTAGONIST USEFUL FOR THE
TREATMENT OF
12      GONADOTROPIN RELATED DISEASES
14 <130> FILE REFERENCE: 20990EP
16 <140> CURRENT APPLICATION NUMBER: 10/552,028
17 <141> CURRENT FILING DATE: 2005-10-02
19 <150> PRIOR APPLICATION NUMBER: PCT/EP04/004132
20 <151> PRIOR FILING DATE: 2004-04-02
22 <150> PRIOR APPLICATION NUMBER: EP 03290831.1
23 <151> PRIOR FILING DATE: 2003-04-02
25 <160> NUMBER OF SEQ ID NOS: 3
27 <210> SEQ ID NO: 1
28 <211> LENGTH: 1197
29 <212> TYPE: DNA
30 <213> ORGANISM: Homo sapiens
32 <220> FEATURE:
33 <221> NAME/KEY: CDS
34 <222> LOCATION: (1)..(1197)
36 <220> FEATURE:
37 <221> NAME/KEY: gene
38 <222> LOCATION: (1)..(1197)
39 <223> OTHER INFORMATION: GPR54 gene
43 <400> SEQUENCE: 1
44 atg cac acc gtg gct acg tcc gga ccc aac gcg tcc tgg ggg gca ccg      48
45 Met His Thr Val Ala Thr Ser Gly Pro Asn Ala Ser Trp Gly Ala Pro
46 1          5          10          15
48 gcc aac gcc tcc ggc tgc ccg ggc tgt ggc gcc aac gcc tcg gac ggc      96
49 Ala Asn Ala Ser Gly Cys Pro Gly Cys Gly Ala Asn Ala Ser Asp Gly
50          20          25          30
52 cca gtc cct tcg ccg cgg gcc gtg gac gcc tgg ctc gtg ccg ctc ttc      144
53 Pro Val Pro Ser Pro Arg Ala Val Asp Ala Trp Leu Val Pro Leu Phe
54          35          40          45
56 ttc gcg gcg ctg atg ctg ctg ggc ctg gtg ggg aac tcg ctg gtc atc      192
57 Phe Ala Ala Leu Met Leu Leu Gly Leu Val Gly Asn Ser Leu Val Ile
58          50          55          60
60 tac gtc atc tgc cgc cac aag ccg atg cgg acc gtg acc aac ttc tac      240
61 Tyr Val Ile Cys Arg His Lys Pro Met Arg Thr Val Thr Asn Phe Tyr
62 65          70          75          80
64 atc gcc aac ctg gcg gcc acg gac gtg acc ttc ctc ctg tgc tgc gtc      288

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65 Ile Ala Asn Leu Ala Ala Thr Asp Val Thr Phe Leu Leu Cys Cys Val
66      85      90      95
68 ccc ttc acg gcc ctg ctg tac ccg ctg ccc ggc tgg gtg ctg ggc gac      336
69 Pro Phe Thr Ala Leu Leu Tyr Pro Leu Pro Gly Trp Val Leu Gly Asp
70      100      105      110
72 ttc atg tgc aag ttc gtc aac tac atc cag cag gtc tcg gtg cag gcc      384
73 Phe Met Cys Lys Phe Val Asn Tyr Ile Gln Gln Val Ser Val Gln Ala
74      115      120      125
76 acg tgt gcc act ctg acc gcc atg agt gtg gac cgc tgg tac gtg acg      432
77 Thr Cys Ala Thr Leu Thr Ala Met Ser Val Asp Arg Trp Tyr Val Thr
78      130      135      140
80 gtg ttc ccg ttg cgc gcc ctg cac cgc cgc acg ccc cgc ctg gcg ctg      480
81 Val Phe Pro Leu Arg Ala Leu His Arg Arg Thr Pro Arg Leu Ala Leu
82 145      150      155      160
84 gct gtc agc ctc agc atc tgg gta ggc tct gcg gcg gtg tct gcg ccg      528
85 Ala Val Ser Leu Ser Ile Trp Val Gly Ser Ala Ala Val Ser Ala Pro
86      165      170      175
88 gtg ctc gcc ctg cac cgc ctg tca ccc ggg ccg cgc gcc tac tgc agt      576
89 Val Leu Ala Leu His Arg Leu Ser Pro Gly Pro Arg Ala Tyr Cys Ser
90      180      185      190
92 gag gcc ttc ccc agc cgc gcc ctg gag cgc gcc ttc gca ctg tac aac      624
93 Glu Ala Phe Pro Ser Arg Ala Leu Glu Arg Ala Phe Ala Leu Tyr Asn
94      195      200      205
96 ctg ctg gcg ctg tac ctg ctg ccg ctg ctc gcc acc tgc gcc tgc tat      672
97 Leu Leu Ala Leu Tyr Leu Leu Pro Leu Leu Ala Thr Cys Ala Cys Tyr
98      210      215      220
100 gcg gcc atg ctg cgc cac ctg ggc cgg gtc gcc gtg cgc ccc gcg ccc      720
101 Ala Ala Met Leu Arg His Leu Gly Arg Val Ala Val Arg Pro Ala Pro
102 225      230      235      240
104 gcc gat agc gcc ctg cag ggg cag gtg ctg gca gag cgc gca ggc gcc      768
105 Ala Asp Ser Ala Leu Gln Gly Gln Val Leu Ala Glu Arg Ala Gly Ala
106      245      250      255
108 gtg cgg gcc aag gtc tcg cgg ctg gtg gcg gcc gtg gtc ctg ctc ttc      816
109 Val Arg Ala Lys Val Ser Arg Leu Val Ala Ala Val Val Leu Leu Phe
110      260      265      270
112 gcc gcc tgc tgg ggc ccc atc cag ctg ttc ctg gtg ctg cag gcg ctg      864
113 Ala Ala Cys Trp Gly Pro Ile Gln Leu Phe Leu Val Leu Gln Ala Leu
114      275      280      285
116 ggc ccc gcg ggc tcc tgg cac cca cgc agc tac gcc gcc tac gcg ctt      912
117 Gly Pro Ala Gly Ser Trp His Pro Arg Ser Tyr Ala Ala Tyr Ala Leu
118      290      295      300
120 aag acc tgg gct cac tgc atg tcc tac agc aac tcc gcg ctg aac ccg      960
121 Lys Thr Trp Ala His Cys Met Ser Tyr Ser Asn Ser Ala Leu Asn Pro
122 305      310      315      320
124 ctg ctc tac gcc ttc ctg ggc tcg cac ttc cga cag gcc ttc cgc cgc      1008
125 Leu Leu Tyr Ala Phe Leu Gly Ser His Phe Arg Gln Ala Phe Arg Arg
126      325      330      335
128 gtc tgc ccc tgc gcg ccg cgc cgc ccc cgc cgc ccc cgc cgg ccc gga      1056
129 Val Cys Pro Cys Ala Pro Arg Arg Pro Arg Arg Pro Arg Arg Pro Gly

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130          340          345          350
132 ccc tcg gac ccc gca gcc cca cac gcg gag ctg ctc cgc ctg ggg tcc      1104
133 Pro Ser Asp Pro Ala Ala Pro His Ala Glu Leu Leu Arg Leu Gly Ser
134          355          360          365
136 cac ccg gcc ccc gcc agg gcg cag aag cca ggg agc agt ggg ctg gcc      1152
137 His Pro Ala Pro Ala Arg Ala Gln Lys Pro Gly Ser Ser Gly Leu Ala
138          370          375          380
140 gcg cgc ggg ctg tgc gtc ctg ggg gag gac aac gcc cct ctc tga      1197
141 Ala Arg Gly Leu Cys Val Leu Gly Glu Asp Asn Ala Pro Leu
142 385          390          395
145 <210> SEQ ID NO: 2
146 <211> LENGTH: 398
147 <212> TYPE: PRT
148 <213> ORGANISM: Homo sapiens
150 <400> SEQUENCE: 2
152 Met His Thr Val Ala Thr Ser Gly Pro Asn Ala Ser Trp Gly Ala Pro
153 1          5          10          15
156 Ala Asn Ala Ser Gly Cys Pro Gly Cys Gly Ala Asn Ala Ser Asp Gly
157          20          25          30
160 Pro Val Pro Ser Pro Arg Ala Val Asp Ala Trp Leu Val Pro Leu Phe
161          35          40          45
164 Phe Ala Ala Leu Met Leu Leu Gly Leu Val Gly Asn Ser Leu Val Ile
165          50          55          60
168 Tyr Val Ile Cys Arg His Lys Pro Met Arg Thr Val Thr Asn Phe Tyr
169 65          70          75          80
172 Ile Ala Asn Leu Ala Ala Thr Asp Val Thr Phe Leu Leu Cys Cys Val
173          85          90          95
176 Pro Phe Thr Ala Leu Leu Tyr Pro Leu Pro Gly Trp Val Leu Gly Asp
177          100          105          110
180 Phe Met Cys Lys Phe Val Asn Tyr Ile Gln Gln Val Ser Val Gln Ala
181          115          120          125
184 Thr Cys Ala Thr Leu Thr Ala Met Ser Val Asp Arg Trp Tyr Val Thr
185          130          135          140
188 Val Phe Pro Leu Arg Ala Leu His Arg Arg Thr Pro Arg Leu Ala Leu
189 145          150          155          160
192 Ala Val Ser Leu Ser Ile Trp Val Gly Ser Ala Ala Val Ser Ala Pro
193          165          170          175
196 Val Leu Ala Leu His Arg Leu Ser Pro Gly Pro Arg Ala Tyr Cys Ser
197          180          185          190
200 Glu Ala Phe Pro Ser Arg Ala Leu Glu Arg Ala Phe Ala Leu Tyr Asn
201          195          200          205
204 Leu Leu Ala Leu Tyr Leu Leu Pro Leu Leu Ala Thr Cys Ala Cys Tyr
205          210          215          220
208 Ala Ala Met Leu Arg His Leu Gly Arg Val Ala Val Arg Pro Ala Pro
209 225          230          235          240
212 Ala Asp Ser Ala Leu Gln Gly Gln Val Leu Ala Glu Arg Ala Gly Ala
213          245          250          255
216 Val Arg Ala Lys Val Ser Arg Leu Val Ala Ala Val Val Leu Leu Phe
217          260          265          270

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220 Ala Ala Cys Trp Gly Pro Ile Gln Leu Phe Leu Val Leu Gln Ala Leu
221      275      280      285
224 Gly Pro Ala Gly Ser Trp His Pro Arg Ser Tyr Ala Ala Tyr Ala Leu
225      290      295      300
228 Lys Thr Trp Ala His Cys Met Ser Tyr Ser Asn Ser Ala Leu Asn Pro
229 305      310      315      320
232 Leu Leu Tyr Ala Phe Leu Gly Ser His Phe Arg Gln Ala Phe Arg Arg
233      325      330      335
236 Val Cys Pro Cys Ala Pro Arg Arg Pro Arg Arg Pro Arg Arg Pro Gly
237      340      345      350
240 Pro Ser Asp Pro Ala Ala Pro His Ala Glu Leu Leu Arg Leu Gly Ser
241      355      360      365
244 His Pro Ala Pro Ala Arg Ala Gln Lys Pro Gly Ser Ser Gly Leu Ala
245      370      375      380
248 Ala Arg Gly Leu Cys Val Leu Gly Glu Asp Asn Ala Pro Leu
249 385      390      395
252 <210> SEQ ID NO: 3
253 <211> LENGTH: 398
254 <212> TYPE: PRT
255 <213> ORGANISM: Homo sapiens
257 <400> SEQUENCE: 3
259 Met His Thr Val Ala Thr Ser Gly Pro Asn Ala Ser Trp Gly Ala Pro
260 1      5      10      15
263 Ala Asn Ala Ser Gly Cys Pro Gly Cys Gly Ala Asn Ala Ser Asp Gly
264      20      25      30
267 Pro Val Pro Ser Pro Arg Ala Val Asp Ala Trp Leu Val Pro Leu Phe
268      35      40      45
271 Phe Ala Ala Leu Met Leu Leu Gly Leu Val Gly Asn Ser Leu Val Ile
272      50      55      60
275 Tyr Val Ile Cys Arg His Lys Pro Met Arg Thr Val Thr Asn Phe Tyr
276 65      70      75      80
279 Ile Ala Asn Leu Ala Ala Thr Asp Val Thr Phe Leu Leu Cys Cys Val
280      85      90      95
283 Pro Phe Thr Ala Leu Leu Tyr Pro Leu Pro Gly Trp Val Leu Gly Asp
284      100     105     110
287 Phe Met Cys Lys Phe Val Asn Tyr Ile Gln Gln Val Ser Val Gln Ala
288      115     120     125
291 Thr Cys Ala Thr Leu Thr Ala Met Ser Val Asp Arg Trp Tyr Val Thr
292      130     135     140
295 Val Phe Pro Leu Arg Ala Leu His Arg Arg Thr Pro Arg Leu Ala Leu
296 145     150     155     160
299 Ala Val Ser Leu Ser Ile Trp Val Gly Ser Ala Ala Val Ser Ala Pro
300      165     170     175
303 Val Leu Ala Leu His Arg Leu Ser Pro Gly Pro Arg Ala Tyr Cys Ser
304      180     185     190
307 Glu Ala Phe Pro Ser Arg Ala Leu Glu Arg Ala Phe Ala Leu Tyr Asn
308      195     200     205
311 Leu Leu Ala Leu Tyr Leu Leu Pro Leu Leu Ala Thr Cys Ala Cys Tyr
312      210     215     220

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315 Ala Ala Met Leu Arg His Leu Gly Arg Val Ala Val Arg Pro Ala Pro
316 225                230                235                240
319 Ala Asp Ser Ala Leu Gln Gly Gln Val Leu Ala Glu Arg Ala Gly Ala
320                245                250                255
323 Val Arg Ala Lys Val Ser Arg Leu Val Ala Ala Val Val Leu Leu Phe
324                260                265                270
327 Ala Ala Cys Trp Gly Pro Ile Gln Leu Phe Leu Val Leu Gln Ala Leu
328                275                280                285
331 Gly Pro Ala Gly Ser Trp His Pro Arg Ser Tyr Ala Ala Tyr Ala Leu
332                290                295                300
335 Lys Thr Trp Ala His Cys Met Ser Tyr Ser Asn Ser Ala Leu Asn Pro
336 305                310                315                320
339 Leu Leu Tyr Ala Phe Leu Gly Ser His Phe Arg Gln Ala Phe Arg Arg
340                325                330                335
343 Val Cys Pro Cys Ala Pro Arg Arg Pro Arg Arg Pro Arg Arg Pro Gly
344                340                345                350
347 Pro Ser Asp Pro Ala Ala Pro His Ala Glu Leu His Arg Leu Gly Ser
348                355                360                365
351 His Pro Ala Pro Ala Arg Ala Gln Lys Pro Gly Ser Ser Gly Leu Ala
352                370                375                380
355 Ala Arg Gly Leu Cys Val Leu Gly Glu Asp Asn Ala Pro Leu
356 385                390                395

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VERIFICATION SUMMARY

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